Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of:	)	
	)	
Transforming the 2.5 GHz Band	)	WC Docket No. 18-120
Program for Schools and Rural Communities	)	

INITIAL COMMENTS BY:

THE IMPERIAL COUNTY OFFICE OF EDUCATION / CALIFORNIA K-12 HIGH SPEED NETWORK

August 7 , 2018

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Executive Summary

The California K-12 High Speed Network (K12HSN) commends the Commission on its efforts to sustain and extend the Educational Broadband Service (EBS) in order to maximize the use of spectrum throughout the nation, the move is long overdue. In California, school districts have had opportunities to expand their service offerings to students and implement administrative efficiencies over the last 20 years. The major undertaking of revising the program via the Notice of Proposed Rulemaking (NPRM) will offer schools in California and across the nation the opportunity to leverage the unused spectrum as they strive to prepare our schools for 21st Century learning and close the Homework gap for students in rural and remote parts of the State.

As the Commission moves forward with this NPRM, it is important to remain focused on the fact that EBS has been a very successful program and that any changes to the EBS licensing should be focused on retaining EBS as a strategic tool for educational institutions and on modernizing the program to meet the demands of educational institutions as they prepare the 21st Century workforce.

Our comments focus on the potential EBS holds to serve as a shared resource for the K-12 educational community and includes a rationale for preserving the availability of the white space as key to strategic initiatives that make our goals for California attainable.

In 2014, the California Department of Education (CDE) in coordination with K12HSN and support from Corporation for Educational Networks in California (CENIC), developed the Broadband Infrastructure Improvement Grants (BIIG) to provide last-mile high speed broadband connectivity grants to remote and geographically isolated schools so they could participate in the new online testing system. As a result of those efforts, over 300 schools received high-speed

broadband to the California Research and Education Network. This exercise also provided insights into the communities in California that lack high-speed broadband access and for which EBS could be leveraged to expand these new high-speed connections from the schools to students in the community. The potential exists to build a statewide LTE network using EBS for K-12 districts and offer the potential of last mile Internet service to unserved/underserved students at home. Access to EBS spectrum is critical to those plans and losing the 2.5 GHz spectrum will detrimentally affect this initiative.

California has several examples of how EBS can be implemented successfully and remain true to the spirit of using spectrum to support education. Successful implementations of EBS can be found in the California counties of Imperial, Kings and Tulare, where the 2.5 GHz spectrum is operated by the County Office of Education to provide high-speed broadband services to K-12 students in the community. Other counties are positioned well to deliver these same services using EBS but unfortunately lack the licenses to leverage this important asset, hence the importance of these proposed changes.

Educational institutions are finally in a position with advances in 4G/5G LTE technology and equipment market conditions being more favorable and affordable.

School districts, colleges and universities across California are very concerned about the potential loss of access to EBS spectrum should it be opened to commercial auctions and lose the educational purpose requirement.

In this document the K12HSN will offer comments on the Notice of Proposed Rulemaking (NPRM) which we believe will have the greatest impact on our state. These are:

1. Rationalization of Existing EBS License Geographic Service Areas (GSAs);
    a. Appendix A § 27.1206 Geographic Service Area
    b. Appendix B Part 16. Additional Flexibility for EBS Licenses

2. Opportunities to Acquire New 2.5 GHz Licenses (White Space);
    a. Appendix B, Part 18. New Local Priority Filing Window
    b. Appendix B, Part 19. Local Priority Filing Window 1
    c. Appendix B, Part 20. Local Priority Filing Window 2
    d. Appendix B, Part 21. Local Priority Filing Window 3
3. Other Issues
    a. Appendix B, Part 25. Licensing White Spaces
    b. Appendix B, Part 22. Local Priority Filing Process
    c. Extending Broadband Services using E-rate subsidized connections

Introduction

The California K-12 High Speed Network (K12HSN) is a state program funded by the CDE. The CDE competitively selected the Imperial County Office of Education (ICOE) as the Lead Education Agency and manager of the California K-12 High Speed Network program. K12HSN provides the California K-12 community with:

- Network Connectivity, Internet Services,
- Teaching and Learning Application Coordination,
- and Videoconferencing Coordination and Support.

The mission of the California K-12 High Speed Network is to enable educators, students and staff across the state to have access to the most reliable high speed network which has the capacity to deliver high quality online resources to support teaching and learning and promote academic achievement.

To accomplish this mission, K12HSN administers K-12's participation in the California Research and Education Network (CalREN). CalREN is the high-speed, high-bandwidth statewide backbone network that includes 14 high capacity network transit locations, and 84 K-12 aggregation sites linking innumerable circuits from K-12 institutions to the statewide backbone. The network infrastructure is leveraged along with other education institutions such as the University of California System, the California State University System, the California Community College System, California's public libraries, seven university medical centers and their affiliates, private universities (Stanford, Caltech, USC) and the Naval Postgraduate School. CalREN is also linked to national research networks, including Internet2, the Department of Energy's Energy Science Network (ESnet), NASA's network, the National Oceanic and Atmospheric Administration's network network (NOAAnet), and similar national networks in the Asia-Pacific Region, Europe, Central and South America, and Africa forming an advanced

state,national, and international “Intranet” for educational use. Network design, management, operations and procurement services are provided by the Corporation for Education Networking Initiatives in California (CENIC)[1], a public benefit corporation.

Network and Internet services to the 84 K-12 aggregation sites are extended to 82% (8,734) of schools, 87% (906) of school districts, and 100% (58) of County Offices of Education in California, which provide direct service to over 5 million students and 482,000 teachers, administrators, and staff[2].

[1] http://www.cenic.org
[2] http://datalink.k12hsn.org

California K-12 Landscape

The state of California is uniquely positioned to address the Homework Gap leveraging existing initiatives that together can solve this problem for very rural communities that lack broadband infrastructure. Current EBS license holders in California have effectively implemented their spectrum in a variety of creative ways, either through self-managed networks, leased to private network operators, or by working together amongst EBS license holders to share common infrastructure. The scenarios vary widely due to the uniqueness of each of the service areas in California, from densely populated urban areas to sparsely populated rural and tribal communities. Current EBS rules allow for flexible models that have served California license holders well. Several counties have led the way and have created successful infrastructure models and many counties are ready to follow, waiting for the opportunity for new EBS spectrum to become available.

As California's school districts faced the prospect of moving to online and computer adaptive student assessments that were piloted in 2013 and field tested in 2014, there were concerns over the capacity of some schools to meet the new bandwidth demand. A statewide report[3] prepared by the California K-12 High Speed Network (K12HSN) and released April 17, 2015 reported that 4% of schools in California had connection speeds below the threshold of 20 Kbps per student recommended for the assessments. While 4% is a low number, applied to California's roughly 10,000 schools it equates to 400 inadequately connected sites.

Working collaboratively with the CDE and State Board of Education, the K-12 High Speed Network (K12HSN) program has undertaken the task of assisting these poorly connected schools and districts with solving their connectivity deficits.

[3] 2015 Connecting California's Children report: https://drive.google.com/file/d/0BwC7DLC52ejLRGJidm5nNU5KX0U/view

The Broadband Infrastructure Improvement Grant (BIIG)[4] was launched in August of 2014 with the goal of using a state allocation of $76,689,000 to address the issues for California's neediest schools. Projects have been undertaken in 38 counties and have or will relieve the connectivity deficits for more than 370 schools. The procurement process of network connections, leveraged network subsidy programs such as E-rate and the California Teleconnect Fund, which provided additional resources that can be used for additional projects.

While the BIIG effort yielded extraordinary results, approximately 20% of the solutions to connect schools resulted in the use of point-to-point wireless technologies due to the lack of terrestrial infrastructure. This speaks to the complexities of providing this vital infrastructure to regions of the state, due to many factors such as difficult terrain, protected lands and issues of right-of-way to name a few.

While BIIG connected the schools with high-speed broadband, *the surrounding communities continue to experience inadequate broadband capacity*. Therefore, the possibility of leveraging the schools new high-speed connections by extending the network using wireless technologies exists. Just as "work" is no longer a place you go, but something you do, teaching and learning are also becoming ubiquitous, occurring in many locations beyond the classroom. Extending connectivity beyond the classroom walls is consistent with the spirit and intent of BIIG and in support of providing the online assessment tools to students and teachers. Gaining access to EBS white space removes a tremendous barrier to accomplishing this ambitious goal.

In the following paragraphs, several examples have been provided on either how EBS is currently being leveraged or the potential is has to benefit some of the most rural and underserved communities in California.

[4] BIIG Status Report – December 2016: https://drive.google.com/file/d/0Bxwk0HypR9DYdDhQS2JKVzJ6R0k/view

Colusa County

Colusa County Office of Education and its school districts are actively trying to obtain and use the EBS spectrum to provide safe and secure Internet access for their students at home. Due to the rurality of the sparse agricultural territory, many students outside of the cities have either poor or no Internet access at home. High speed Internet access ends at the city limits. Verizon is the only provider with data presence in some of the rural areas. Attempts to utilize Verizon's JetPack solution have been made, however it did not work in some of the remote areas. Currently, service providers will not expand their services areas due to the absence of any return on investment. This problem is compounded by high unemployment in Colusa county and many families of our students that may potentially have access cannot afford it. This lack of service creates a digital Homework Gap in Colusa county. Students that do not have access to high speed connectivity for rich media content will be left behind. County Offices of Education and school districts are mandated to provide equitable access to digital curriculum for everyone. The Colusa County Office of Education stands ready to develop its own 4G LTE network upon availability of EBS and our initial analysis shows that we could serve 90 to 95% of our students that do not have access in our initial rollout. Subsequent expansion of this infrastructure would provide coverage the remaining students that did not have access. A self-built network leveraging EBS would be the only possible solution for these students to obtain Internet access at home and end the Homework Gap in our county.

Alternatively, attempts to partner with Sprint for LTE access on the underutilized EBS spectrum in our area have proven to be unsuccessful insofar. We are now regrouping and building a case to present to them how much we need this access in our county and how they could help us achieve it.

Fresno County

Golden Plains Unified school district is located in rural Fresno county. Serving primarily an agricultural community, the district is challenged with serving a low-income population with a high rate of English Language Learners. The district has an enrollment of approximately 1,700 K-12 students with over 95% designated as low income.

Most of the geographic area served by the school district does not currently have any commercial home Internet service providers. Given the population demographics there is a lack of incentive for commercial providers to expand service to the area. The Fresno County Superintendent of Schools is actively working with Golden Plains Unified School District to explore options to address the lack of Internet connectivity for the student population. Golden Plains is a BIIG grant recipient with improved Internet access to the school. This leverage, coupled with access to EBS white space would be a potential solution to address the Digital Divide that is prominent in this area.

Imperial County

Recognizing the need to bridge the Homework Gap to allow students to reach their full academic potential, the Imperial County Office of Education (ICOE) launched an infrastructure initiative that will help ensure equal access to Internet services throughout the county.

To get started, ICOE teamed up with local school districts to bring mobile wireless Internet connectivity to students in five of our local communities: Brawley, El Centro, Heber, Seeley and Westmorland. The successes and lessons learned from this initial "pilot" will drive the countywide build-out of a private wireless network that will blanket our communities and serve our more than 37,000 students countywide. The 5 EBS license holders in the Imperial County GSA are working in coordinated fashion to share infrastructure and resources to serve

the community. Imperial County Office of Education, Central Union High School District, Imperial Valley College, Seeley Union School District and Meadows Union School District are the current EBS license holders in the GSA, with ICOE coordinating the use of the available frequencies to maximize the capacity of their shared infrastructure to improve the end-user experience.

The BorderLink[5] pilot relies on 4G Long Term Evolution (LTE) technology, the same wireless technology that connects mobile phones and devices from all of the major carriers and leverages the existing EBS licenses available within the GSA. LTE enables connectivity to mobile devices such as laptops, tablets and smartphones. It allows student devices to be connected to the Internet anytime, anywhere, at high-speeds and with the same protections and policies that schools maintain for students at school. It can also connect smart meters, vehicles, traffic signaling, video surveillance, and many other devices that will change how our municipal and county government delivers its services in the community.

Two decades ago, the Imperial County Office of Education (ICOE) was instrumental in establishing a state-of-the-industry fiber optic communications network in Imperial county.

Today, thanks to these efforts, Imperial county teachers and students enjoy the educational benefits of having reliable, high-speed Internet access at school. While educators and students are able to make the most of high-quality online tools and resources at school, students face new inequities at home. As schools turn to digital learning, teachers increasingly assign homework requiring Internet access at home.

Fortunately, this important equity issue will soon be solved in our county thanks to the availability of the EBS licenses. The goal of ensuring that every student is connected to the Internet, regardless if at school, home, or elsewhere in the community, is about to become a

[5] www.borderlink.org

reality in Imperial county.

BorderLink will deploy a private education mobile wireless network infrastructure that complements the existing fiber-optic infrastructure throughout Imperial county that connects our schools and public agencies to each other and the Internet. Students, teachers, and others will be provided devices to ensure this high-speed connectivity is with them as they leave school grounds. Whether at home or elsewhere in the community, students will no longer worry about having the access they need to further their education, engage with other students or teachers, or access their digital curriculum or other resources. BorderLink is Imperial County's response to the increasing needs of our schools and students as we work to prepare our students for college and the workforce. We expect to close the Homework Gap and much more, as we focus on improving the quality of life in our community and make Imperial county an ideal place to live, learn, and work.

We strongly believe that the BorderLink project exemplifies what the Commission intended EBS to accomplish across the nation. California is poised to replicate this model across similar rural and isolated communities.

Kings County

A progressive district in Kings county, Corcoran Unified, introduced a One2One initiative in 2005. The program provides students with access to technology learning tools both inside and outside the classrooms and beyond the school hours. For 6-12th grades, students take home a device with a router through which they gain access to the school district's network. This work was undertaken cooperatively with Kings County Office of Education which offers Internet access for every student using EBS and has greatly improved student achievement.

Kings County Office of Education has been extending classroom connectivity to the

homes for several years now[6] and following in their footsteps, Imperial county launched its own pilot starting in 2018. With the right partners and sponsorship from the State, this model can be extended to rural and disadvantaged communities across the state, leveraging the work accomplished via the Broadband Infrastructure Improvement Grants. Other Counties throughout California such as Colusa, Fresno, Monterey, San Bernardino and Trinity have begun exploratory efforts to reduce this digital divide using wireless broadband.

Mono County

In Mono county, California, the entire county is identified as rural in the national census. The schools and libraries serve as hubs for community activity and engagement. However, due to low population density, rugged terrain, and federal regulations for access to rights of way, no traditional providers will ever invest or expand service in Mono County. However, EBS can provide high quality access to educational resources that can revolutionize teaching and learning. By providing community-based Internet access via EBS, our students and families would, for the very first time, experience access to learning resources that fellow Americans in more urban or affluent communities have had for decades. EBS access has the potential to completely change our students' lives forever, and for the better.

San Benito County

San Benito is an agricultural county an hour south of the Silicon Valley. San Benito is predominantly a farming region and more recently an emerging bedroom community for the Silicon Valley. A large part of the county lacks any option for mobile or land-based communications. Many students in these rural communities face a perpetual divide in access to

[6] Kings County initiative: https://fms.kings.k12.ca.us/fin/dotnet/Prerequisites/KCOEHuawei.mp4?autoplay=1

digital content as the adoption of school resources transitions to 21st century delivery.

In preparation for global competition, our students are the primary defense of our Nation's continuance as a superpower. We believe that the investment of technology through every student will be a road of great return. It is our educational systems that will prepare our students for navigating the new virtual world and provide the tools to flourish within it. With educational communities leading the access to digital media, we have the unique opportunity to shape the Internet to assist with quality growth of every student. Thereby bypassing many of the dangers, pitfalls and global malicious efforts that attack our systems every day.

We believe that The San Benito County Office of Education is poised to be able to deliver a view into the world through an EBS spectrum in a safe and managed model allowing students to flourish through equitable and safe access. The delivery of data communications is no longer a luxury afforded to the affluent but a valuable resource for continued sustainability of all communities. Rural communities such as San Benito County are the meeting point where California's two major contributions to the world can intersect. The agriculture and technology industries are the heart of California's global contributions. Through the innovation of these communities we can transcend potential opportunities for students of these regions and continue to lead in innovation and equity.

San Bernardino County

San Bernardino county sits approximately an hour directly east of Los Angeles. The county is the largest geographic county in the United States by area, and while the majority of our students live in concentrated suburban cities, many of our approximately 385,000 student live in remote, rural and underserved communities. Through its partnership with the California K12HSN, the San Bernardino County Office of Education has been able to delivery high speed

Internet access to our most isolated schools using state provided BIIG funding. The BIIG projects connected the classrooms of over 8,000 students to the Internet at speeds that have allowed several small districts to participate in the online assessments, deploy innovative EdTech initiative, including distance learning and one-to-one student device program. The infrastructure investments made by the districts of San Bernardino county, the San Bernardino County Office of Education, the K12HSN and the state will benefit the staff and students of our most under-resourced schools.

However, while the real and significant successes of the BIIG investments should be celebrated, it is important that San Bernardino county stakeholders do not lose sight of the additional needs of our students, specifically the duty to close the "Homework Gap" created by the lack of access to quality high speed Internet services at home. Without access to reliable high speed access in the house, our most vulnerable and underprivileged students are excluded from modern educational programs, and will be further disadvantaged as they try to prepare for a future that demands technology skills for admission into colleges and even entry-level jobs.

Unfortunately, due to the construction costs and limited populations, the major telecommunication carriers have little incentive to invest in broadband infrastructure that will meet the needs of our county's most isolated and rural districts. As such, it is imperative that San Bernardino County Office of Education and its local and state partners identify resources and develop solutions in order to solve this pressing problem. San Bernardino County Office of Education believes the EBS is one such resource, and we are actively working on a pilot program with one of our underserved districts, a private local partner and the San Bernardino County Catholic Diocese. If the pilot program is successful, approximately 1,000 of our partner districts must underprivileged students will be provided access to high speed wireless Internet service in their homes. It will also allow the partner district to maximize the benefits of its already

considerable investment in their one-to-one student device initiative and its adoption of cutting edge digital curriculum. If the rules are changed to prioritize the assignment of the EBS licenses to regional education agencies, like County Offices of Education, the San Bernardino County Office of Education will be in a much better position to work with its local districts and private partner to deploy wireless networks and bridge the Homework Gap and continue to ensure that all students in San Bernardino county get the educational resources to which they are entitled.

Tulare County

Lindsay Unified School District (LUSD) is located in rural central California and has historically experienced difficulties securing appropriate Internet bandwidth to support educational needs. Located in an economically difficult area, it poses little incentive for Internet service providers to expand services and infrastructure to support this community. With traditional copper infrastructure becoming obsolete and unable to support LUSD's bandwidth needs of today, service providers to include major telecommunication carriers have struggled to provide adequate infrastructure.

E-rate subsidies and other grant funding sources have allowed LUSD the opportunity to reach out to local providers to secure high speed fiber-optic connections to interconnect Lindsay schools. However, this hasn't solved the needs of over half of LUSD's 4,700 students, which don't have access to basic Internet for 24/7 online learning opportunities (LUSD Strategic Design).Wireless technologies, such as LTE via EBS frequencies have afforded the opportunity for LUSD to reach every student device provided through LUSD's "One to World" device distribution ensuring all students are connected. LUSD will continue to search for opportunities to expand throughput capabilities for our students and remove the current limitations of existing network infrastructure.

Trinity County

Trinity is a county in the northwestern part of the state of California. As of the 2010 census, the population was 13,786 making it the fourth least-populous county in California. The county seat and largest community is Weaverville.

Trinity county is rugged, mountainous, heavily forested, and lies along the Trinity River within the Salmon and Klamath mountains. The county has no traffic lights, no freeways, and no parking meters.

Building a self-managed mobile infrastructure using EBS on Oregon mountain would reach students in the towns of Weaverville, Douglas City, Junction City and Lewiston. Those communities have student enrollments of around 700, 180, 100 and 60 respectively and of which 80% of them qualify for the free and reduced school lunch program. The Oregon mountain site would most likely reach all of Weaverville students; about half the Douglas City students, approximately 75% of the Junction City students and probably half of the Lewiston student population. Weaverville and Junction City are both mostly covered by terrestrial broadband service these days. Only a small portion of Douglas City is currently served with broadband. Lewiston remains unserved. Infrastructure in the Oregon mountain has the potential to provide service to approximately 800 students, most of whom qualify for the free and reduced school lunch program and 200 of whom would have no other means of Internet access.

Another potential area for signal distribution using EBS would be Plummer Peak out of Hayfork. Mountain Valley Unified is in Hayfork, with approximately 350 students, of which 85% qualify for the free and reduced school lunch program. Terrestrial broadband service is questionable and most likely remains underserved.

Burnt Ranch has a student population that could really benefit from EBS, however, it is a

really small school with about 85 students that mostly qualify for the free and reduced school lunch program and serves a large Native American population. There is no other Internet provider in this community and will remain unserved for the foreseeable future. They are hopes for the completion of an initiative known as the Digital 299 Highway project, which would develop high-speed broadband using fiber optic cable, but those efforts seems to have been abandoned. The terrain in Trinity county is mountainous, but in most cases, a suitable location is available in the towns that would allow signal coverage to most of the community with EBS frequencies and with line-of-sight to the school for the school to serve Internet to the EBS site.

Discussion

Rationalization of Existing EBS License Geographic Service Areas (GSAs)

Appendix A § 27.1206 Geographic Service Area

The FCC proposes to expand GSAs to the borders of census tracts covered or intersected by the existing GSAs. The Commission asks whether it should require some current coverage threshold to be met by a licensee's existing GSA (such as coverage of 25% of the census tract) in order to permit the GSA to expand in the Census Tract, how it should resolve overlapping expansions by more than one GSA in a census tract, whether the expansion should be based on counties rather than census tracts, and what service requirements should be required in the areas of expansion.

We recommend that the new GSA be based on county boundaries as they align better with school district service areas. We believe that EBS provides ample capacity to have multiple operators that can serve multiple education needs in the county via assignment of other available channel blocks. Coupled with a good process to ensure license holders are meeting minimal use requirements, licenses can be made available to institutions that can make best use of the spectrum.

Appendix B Part 16. Additional Flexibility for EBS Licenses

The Commission seeks comments on whether licensees whose license were granted via waiver, should be given additional flexibility to lease their spectrum or to transfer or assign their licenses freely. Given this flexibility to transfer or assign an entire EBS license to non-eligible entities, free of educational use requirements, the Commission also proposes to eliminate the educational use requirements in Section 27.1203 for all EBS licensees. The

Commission also proposes to eliminate restrictions on EBS lease terms on a going forward basis and ask whether additional revisions are necessary to fully rationalize our rules for the transferability, leasing and use of EBS spectrum."

While we understand that the Commission seeks the most efficient use of the EBS spectrum, we don't believe that removing the educational requirement of EBS would move towards that goal. *EBS is the only education purpose frequencies* in the band and should be preserved as such. For California, this allows the potential for educators to serve students in isolated and rural communities, places where commercial providers have been unwilling to invest and serve. We recommend that the Commission revisit the educational use requirements and modernized them appropriately with general metrics that can surpass the changes in technologies.

While leasing of licenses has been an effective model in some counties, the level of sophistication of school technology leaders has grown tremendously in California. We have seen a trend in the last three years of school districts and County Offices building their own private LTE network providing Internet service to students. The pace of these deployments is growing due to enhanced market conditions and a ripe ecosystem of equipment and devices on the 2.5 GHz band. We strongly feel that EBS should be kept as a spectrum for educational purposes primarily. Transfer to non-educational entities and the elimination of the educational use requirements undermines the legacy of EBS.

Furthermore, using auction to distribute licenses, including to resolve competing applications will hinder, not help, efforts to reach underserved and unserved students and families. Auction costs would stretch already limited state and local education budgets.Instead, conflicting license applications should be resolved by encouraging applicants seeking to serve the same service areas to work collaboratively through a single consortia application.

Opportunities to Acquire New 2.5 GHz Licenses (White Space)

We welcome the opportunity that the Commission offers to acquire new licenses on the 2.5 GHz as this is one of the biggest barriers in California for maximizing use of the EBS spectrum. An analysis done by K12HSN shows that out of the 282 rural of California schools connected through BIIG, a majority of those schools are located in areas with available EBS whitespace. There is a great opportunity to leverage EBS for many rural communities that have no other options.. While we agree with the Commission on the which institutions should be prioritized to apply for new licenses, we urge the Commission to consider offering local accredited educational and governmental institutions who currently aren't license holders to have the first priority instead of the third window as currently proposed. Educators have been waiting for 20 years for the opportunity to apply for new licenses and educational institutions across California are coordinating efforts to effectively leverage this asset to the best use of students and the community.

Appendix B, Part 18. New Local Priority Filing Window

The Commission proposes to require an applicant to demonstrate as part of the application process that it has a local presence, and that an EBS-eligible entity should be considered to have a "local presence" when it is physically located within the license area where service is proposed.

We propose that this requirement should be placed on all new EBS licenses, after the rationalization of GSA has occurred. Failing to enforce local presence on all new licenses, may remove the opportunity for the local community and students from the benefits of EBS spectrum in providing educational use.

In past, many EBS licenses were issued to entities who did not have a local presence and

in cases, may lead to the educational purpose requirement not provided in the area where the GSA resides but relocated to the area where the license holder resides. In a sense, misappropriating the educational support the EBS license could offer to the local community. Therefore we recommend to the Commission, that all new license must have a local presence clause.

Furthermore, we recommend to the Commission that white space be made available to non-EBS eligible entities, only when all options have been afforded to EBS eligible entities (new and existing license holders). We also recommend that if a non-EBS eligible institution is licensed for EBS, that the educational use requirement remains, to ensure that communities are not left out from the opportunity to use this asset.

Appendix B, Part 19. Local Priority Filing Window 1

The Commission seeks comment on opening a window that would permit existing 2.5 GHz licensees to expand their service to the county border if they were able to demonstrate that they had a local presence in that county, and if they covered at least 25 percent of census tracts in that county. Such a window would allow existing licensees to quickly put white space to use, but it would also preclude new entrants.

We agree with the Commission's recommendation that existing EBS license holders be allowed to expand their service to county borders as long as they demonstrate local presence and meet the minimal educational use requirements as established. This approach seems consistent with the rationalization process of the GSA. As an example, In Imperial county, there is a specific case of a school district that is within County boundaries but outside the GSA, preventing them from receiving services. This expansion to County boundaries aligns well with service jurisdictions of school agencies.

This said, we urge the Commission to consider prioritizing applications for new licenses to accredited education institutions that have local presence in the first filing window. Followed by the rationalization of the GSA, prioritizing new applications makes the most sense.

Appendix B, Part 20. Local Priority Filing Window 2

The Commission seeks comments on opening a new filing priority filing window for Tribal Nations. The Commission proposes to limit participation to federally-recognized American Indian Tribes and Alaska Native Villages that also have a local presence. The Commission also proposes not to limit the number of channels that a Tribal Nations could apply for as EBS-eligible entities for the purposes of participating in the Native National entity filing window.

We are supportive of the Commission's approach towards providing Tribal communities with the opportunity to apply for EBS licenses. Consistent with our previous recommendation, we propose prioritizing local education accredited institutions that serve students over Tribal communities; and favoring applications that demonstrate a partnership amongst both. Public education often works hand-in-hand with Tribal communities to support the educational efforts of children living within Indian reservations. We recommend that the Commission afford the "minimum necessary" spectrum that can be maximized by the applicant and allow them to apply for additional spectrum if the applicant can demonstrate that current capacity is maximized. We suggest to the Commission that spectrum allocation follows a conservative approach and perhaps limits the license request to two channel blocks (8 channels) of EBS.

Appendix B, Part 21. Local Priority Filing Window 3

The Commission seeks comments on opening a new local priority filing window for educational entities that do not hold any 2.5 GHz spectrum. The Commission would propose to limit participation in such a window to accredited institutions as well as governmental organizations engaged in the formal education of enrolled students who are not 2.5 GHz licensees as of the adoption of this NPRM and only in areas in which they have a local presence. The Commission seeks comments on whether to assign new EBS licenses on a county-wide or census tract basis.

We applaud the Commission's approach towards prioritizing Educational Institutions with local presence to apply for available EBS licenses. We would prefer that Educational institutions be first priority as in a many cases Educational institutions provide services to Tribal communities.

The current license holders are often issued to school districts. The district may elect to lease or transfer ownership of the license at the detriment of other districts within the county. We believe that in order to avoid that situation, close coordination between the district and county agencies is important, regardless of who owns the license.

As mentioned with the Window 2, we suggest a new license be limited to a total of 2 channel blocks (8 channels).

Other Issues

Appendix B, Part 25. Licensing White Spaces

The Commission proposes that after any new licenses have been assigned through one or more local priority filing windows, any remaining 2.5 GHz spectrum would be made available for commercial use via competitive bidding using our general Part 1 competitive bidding rules. The Commission seeks comment on this proposal and on the appropriate size of such licenses and the size of channel blocks. The Commission also proposes to apply designated entity preferences in this auction, and to eliminate the EBS eligibility criteria contained in Section 27.1201 of the rules with respect to unassigned spectrum and ask for comment on these proposals.

We recommend the Commission consider a compromise position on auctioning off the white space. We recommend that the FCC to retain a subset of the available white space spectrum for future educational use. For example, if an area has all available blocks of EBS (A,B,C,D and G) three of the blocks (12 channels) are auctioned off and two blocks (8 channels) are retained for future educational use. In areas where most of of the EBS is allocated, a minimum of one block (channels 1-3) is retained and the others auctioned off.

Alternatively, if the Commission auctions the available white space, we recommend that the Education use requirement remain in force for the auctioned spectrum.

It is foreseen that as technology continues to be a component of education in the future, Educators will see more demands in deploying on the EBS spectrum. By holding back some of the spectrum, it allows for future applications that have not yet been realized.

Appendix B, Part 22. Local Priority Filing Process

The Commission seeks comments on the appropriate time frame for any of the new local priority filing windows, how long the windows should be open, and how much notice to give. The Commission asks entities that are interested in participating in the application window and obtaining 2.5 GHz licenses to indicate their interests and the difficulties that they may face to help us evaluate any possible technical and process issues that may arise in implementing one or more new local priority filing windows for applicants and processing such applications.

We recommend the Commission open the filing process with a duration of 90 days in order to allow Educational institutions process the application and obtain all required approvals which may require Board action.

Extending Broadband Services using E-rate subsidized connections

The Commission should clarify whether EBS licensees that use their license to extend an eligible school's E-rate-covered Internet access service to student homes should be obligated to cost allocate, in their requests for E-rate support, traffic that originates off-campus. E-rate has been a critical component to expanding services to underserved and unserved areas and is consistent with the spirit of the EBS modernization to maximize the use of this public asset. Lack of clarification on this area would potentially deter education institutions from making the appropriate investments or potentially jeopardizing their current E-rate subsidies.

Conclusion

More than ever before, school leaders are under tremendous pressure to ensure equity of access to all educational resources for all students. Access to reliable, cost-effective and scalable broadband is imperative for the nation to maintain its competitive advantage. California schools are poised to close the digital divide and the Homework gap with the availability of the 2.5GHz spectrum. Connectivity levels the playing field for many schools and communities and provides the necessary tools to incentivize innovation, learning and preparing students for a bright future.

EBS has been and continues to be an important tool for educators to promote effective and modern educational practices and support rural and isolated communities. While the areas that the FCC seeks to reform EBS are substantial, we recommend minor (but important) improvements that will make a tremendous difference on how EBS is maximize and support its continued success.

Finally, we commend the Commission for taking this important step and encourage it to take bold action in this unique opportunity to modernize EBS.

Respectfully,

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